

What is Active Learning?

From UT Arlington's Active Learning Website

Active learning has many definitions ... but at UT Arlington, we define it as:

Active learning places the student at the center of the learning process, making him/her a partner in discovery, not a passive receiver of information.

It is a process that employs a variety of teaching and learning strategies to place the responsibility for creating and defining the learning environment on the instructor and the responsibility for effective engagement in the learning process on the students.

Active learning encourages students to communicate and interact with course materials through reading, writing, discussing, problem-solving, investigating, reflecting, and engaging in the higher order thinking tasks of application, analysis, synthesis, and evaluation.

An active learning approach draws upon a continuum of teaching and learning strategies, including for example class discussion activities, undergraduate research, and community-based learning experiences.

What Research tells us about Active Learning

Active Learning draws upon the concept of experiential learning, where “knowledge is created through the transformation of experience” (Kolb, 1984; Dewey, 1938; Lewin, 1942). These techniques take advantage of what is termed the “generation effect” in learning and memory science. In short, this effect refers to the finding that better learning occurs when an individual produces information rather than having it delivered to them (Slamecka and Graf, 1978). Research has also shown that students remember more when they learn to handle information at the higher levels of [Bloom's Taxonomy](#) (application, analysis, synthesis, and evaluation) because more reflection and elaboration is required of them (Huitt, 1992).

In 1997, the American Psychological Association concluded that, “the learning of complex subject matter is most effective when it is an internal process of constructing meaning from information and experience” (American Psychological Association, 1997). Compared to the traditional lecture-based approach to teaching, in which students are likened to sponges (Keeley et al, 1998; Fox-Cardamone and Rue, 2003) or bank-like depositories of information received from their instructors (Freire, 1970), active learning strategies emphasize constructivist qualities such as independent inquiry and the structuring and re-structuring of knowledge (Niemi, 2002). Active learning occurs while students are studying ideas, engaging in problem solving, and applying content. They acquire knowledge and skills while actively engaging in inquiry and are reflecting on their experiences (Silberman, 1996). Thus a key to improving active learning in the classroom lies in improving the quantity, extent and depth of students' involvement in their own educational experience (Weimer, 1996).

Studies specific to the college classroom and active learning techniques have demonstrated that students retain information better and develop better higher-level thinking skills when these methods are used (McKeachie et. al., 1987; Bok, 2006). These techniques have a powerful impact on students' learning, such as in the student's ability for the “transfer of knowledge to new situations or measures of problem-solving, thinking, attitude change, or motivation for further learning” (McKeachie et al., 1986).

Another benefit of using active learning techniques is their ability to counteract the waning attention of students as a class progresses. In a standard lecture format class, students are generally able to stay focused for only 15-20 minutes (Johnstone and Percival, 1976). Incorporating active learning methods into a lecture can engage the students before their attention drifts off and reset the attention span clock.

UT Arlington is composed of a diverse mix of students. With such diversity comes a variety of learning styles. These styles can be viewed through the lens of various theoretical constructs, such as an experiential learning model (Kolb, 1984; Fox and Ronkowski, 1997), a learning outcome model, a developmental approach, and a cognition and motivation theory (Cross, 1998). Regardless which theoretical understanding of student learning styles one utilizes, identifying their learning styles and “getting students involved in thinking, questioning, and actively seeking knowledge is a key to effective education” (Cross, 1998). For example, adult students—a significant population at UT Arlington—tend to be “self-directed learners” (Knowles, 1980) who want to draw upon their experience and “would rather be actively involved in learning than sitting passively on the sidelines” (Meyers and Jones, 1993). Other research has explored differences in learning styles between women and men (Gilligan, 1993; Belenky et al, 1986) and among ethnic groups (Banks, 1988). Despite the variety of learning styles posed by a diverse student population, Meyers and Jones (1993) conclude that “Those who accept the premise that different students will learn in different ways ... will find that active-learning strategies not only enliven the classroom but significantly improve their students’ thinking and learning capabilities.”

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